

REMARKS/ARGUMENTS

Claims 1-4, 6, 8, and 9 are pending herein. Claims 1, 3, 4, 6 and 8 have been rewritten to correct matters of form and for clarification purposes only. More specifically, the recitation of "a ceramic electrostatic chuck member" has been changed to --a ceramic member-- in claims 1, 3, 4 and 6, and the word "therewith," referring to the ceramic member in claim 1, has been changed to --with said ceramic member--. Claim 8 has been rewritten to recite a bonding layer "consisting of" the claimed layered structure. Claims 5, 7, 10 and 11 have been cancelled without prejudice or disclaimer. Applicants respectfully submit that no new matter has been added.

1. Examiners Kitov and Sircus are thanked for the courtesies extended to Applicants' undersigned representative during a telephonic interview on July 13, 2005, the substance of which is incorporated below.
2. Non-elected claims 5, 7, 10 and 11 have been cancelled hereby without prejudice or disclaimer. Applicants presently intend to file a divisional application to pursue the subject matter of the non-elected claims, and thus reserve the right under 35 USC §121.
3. Applicants appreciate Examiner Kitov indicating that claims 8 and 9 would be allowed if rewritten to overcome the claim objection to claim 8. Applicants respectfully submit that claim 8 has been so rewritten. Accordingly, Applicants respectfully submit that claims 8 and 9 are in condition for allowance.

In addition to claims 8 and 9, Applicants respectfully submit that all claims pending herein are in condition for allowance for the reasons explained below, and respectfully request that the PTO issue a Notice of Allowance for this application in due course.

4. The objection to claim 8 is noted, but deemed moot in view of rewritten claim 8 submitted above. Accordingly, Applicants respectfully request that the above objection be reconsidered and withdrawn.

5. Claim 1 was rejected under §103(a) over Matsumaga in view of Tomaru. Applicants respectfully traverse this rejection.

Independent claim 1 recites an electrostatic chuck having a bonded structure comprising a ceramic member having an electrode in direct contact with the ceramic member, a metal member, and a bonding layer that bonds the ceramic member and the metal member. The bonding layer comprises at least a first outermost bonding layer bonded to the ceramic member, a second outermost bonding layer bonded to the metal member, and a polyimide layer disposed between the first and second outermost bonding layers, and each of the first and second outermost bonding layers comprises a silicone layer.

In the Office Action, Examiner Kitov asserted that the "Matsumaga reference completely satisfies the Applicant's Claim 1 limitation of the electrode being in direct contact with the electrostatic chuck. In both systems of Applicant's and Matsumaga, the electrode is part of the chuck structure" (Office Action, page 8, lines 2-5). That is, Examiner Kitov asserted that Matsumaga's structure, which includes an electrode 18 embedded between two isolative layers 16 and 20 as shown, for example, in Matsumaga's Fig. 1, is "identical" to the structure shown in Fig. 2 of the present application, where the electrode 18 is embedded within "isolative layers of the chuck (element 10 in Fig. 2)" (Office Action, page 7, line 2--page 8, line 1). Applicants respectfully submit, however, that this interpretation of claim 1 is clearly improper, and that the specific recitation of the word "ceramic" before "member" in claim 1 was not properly considered.

That is, Applicants respectfully submit that "isolative element" 10 in Fig. 2 of the present application is clearly a ceramic member (see page 7, lines 1-11 of the original specification and the corresponding substitute specification paragraph filed in

the September 4, 2003 Amendment). Moreover, in the remarks of the October 7, 2004 Amendment, Applicants emphasized that claim 1 recites that the ceramic member *itself* has an electrode in direct contact *therewith*. Applicants respectfully submit that the present specification and drawings show that the claimed ceramic member is a ceramic member, in the form of a layer as shown, that is part of the overall bonded electrostatic chuck structure, and that the electrode is in direct contact with the ceramic member.

During the telephonic interview, Examiner Kitov asserted that the recitation of a "ceramic electrostatic chuck member" being part of the claimed electrostatic chuck structure was confusing, and suggested that claim 1 be rewritten to clarify that the ceramic electrostatic chuck member is a ceramic layer, and that the electrode is in direct contact with the ceramic layer. Applicants respectfully submit that changing the term "ceramic electrostatic chuck member" to --ceramic member-- (rather than inserting another term such as layer) merely simplifies the language *naming* the same structure previously recited in claim 1, and does not otherwise change the scope of claim 1. Likewise, changing "therewith" to --with said ceramic layer-- is merely a restatement of the same relationship between the ceramic member and the electrode that was previously recited in claim 1, and does not change the scope thereof. In that manner, claim 1 still recites an electrostatic chuck structure including, among other things, a ceramic [electrostatic chuck] member having an electrode in direct contact [therewith] with the ceramic member.

On the other hand, in Matsunaga, the electrode 18 is part of the overall layered chuck structure, but the electrode 18 itself is not in direct contact with the ceramic layer 22 of the chuck structure, and is, in fact, separated from the ceramic layer by the adhesive layer 20. During the telephonic interview, Examiners Kitov and Sircus agreed that claim 1, as clarified in the manner discussed above does, in fact, distinguish Matsunaga.

Examiner Kitov then asserted that the secondary reference teaches a structure including a ceramic layer having an electrode in direct contact therewith, referring to

Fig. 2 of Tomaru, and indicated that he may instead apply Tomaru as a primary reference, rather than as a secondary reference in connection with Matsunaga. Applicants respectfully submit, however, that in the present rejection, Examiner Kitov applied Tomaru only with respect to the teachings regarding silicone. Changing the rejection at this stage by making Tomaru a primary reference without issuing a new Office Action would be improper, and further, would constitute an entirely new ground of rejection that was not necessitated by the mere clarification of claim 1. Moreover, Applicants respectfully submit that the significant deficiencies of Tomaru would present drawbacks to applying this reference as a primary reference, and that such a rejection would be improper, for the reasons explained below.

That is, Applicants respectfully submit that, in Tomaru, the ceramic insulating layer 12 is bonded to the metallic plate 10 via a single adhesive layer 18, which is, in one case, a very thin silicone rubber adhesive (see Tomaru, Col. 6, lines 8-18), using low pressure compression techniques. There is no disclosure or suggestion in Tomaru, however, that the adhesive/primer layer has a multi-layer structure including a silicone first outermost bonding layer, a silicone second outermost bonding layer, and a polyimide layer therebetween, as claimed.

To the contrary, Applicants respectfully submit that Tomaru actually teaches that the amount of adhesive/primer between the ceramic insulating layer 12 and the metal plate 10 should be small in order to prevent reducing the thermal conductivity of the structure. Col. 6, lines 14-18 of Tomaru teach that "If used, the thickness of the adhesive a primer layer should preferably be in the range of 0.1 to 30  $\mu\text{m}$ ." In view of the specific teaching in Tomaru, that the amount and thickness of the adhesive/primer between the ceramic insulating layer and the metal plates, if provided, should be small and no greater than 30  $\mu\text{m}$ , Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to in any way modify the adhesive/primer layer to instead include multiple layers, much less the specified layers claimed.

In summary, Applicants respectfully submit that the changes made hereby to claim 1 merely rename the existing structural features of claim 1, using specific

language as requested by Examiner Kitov, and do not in any way change the scope of claim 1. Even before being rewritten for clarification purposes only, Applicants respectfully submit that claim 1 defined patentable subject matter over Matsunaga because Matsunaga does not disclose or suggest any structures including a ceramic member having an electrode in direct contact with the ceramic member (i.e., a ceramic member having an electrode in direct contact therewith), as claimed. Although the secondary reference shows a structure including a ceramic insulating layer having an electrode in direct contact therewith, Examiner Kitov has not officially set forth any specific grounds of rejection using the secondary reference instead as a primary reference, and the changes to claim 1 do not themselves necessitate such an entirely new rejection because the scope of claim 1 remains unchanged. Moreover, Applicants respectfully submit that a new rejection based instead on Tomaru would be improper in any case because Tomaru does not disclose or suggest a multi-layered bonding layer between the ceramic insulating layer and the metal member, nor would one skilled in the art have been motivated to add additional silicone and polyimide layers to Tomaru's adhesive layer in view of Tomaru's specific teaching that the amount and thickness of the adhesive should be small.

For at least the foregoing reasons, Applicants respectfully submit that all claims pending herein define patentable subject matter over the applied references, and respectfully request that the above rejection be reconsidered and withdrawn.

6. Claim 2 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of *In re Aller*; claim 3 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of Parkhe; claim 4 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of McMillin; and claim 6 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of Ushikoshi. Applicants respectfully traverse these rejections.

Claims 2-4 and 6 each directly depend from independent claim 1, which is discussed in section 5 above.

Since independent claim 1 defines patentable subject matter over the applied references for the reasons explained above, Applicants respectfully submit that the dependent claims 2-4 and 6 likewise define patentable subject matter over the applied references by virtue of their dependency from independent claim 1. Accordingly, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

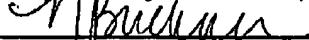
If Examiner Kitov or Examiner Circus believe that contact with Applicants' attorney would be advantageous toward the disposition of this case, they are herein requested to call Applicants' attorney at the phone number noted below

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

July 14, 2005

Date

Respectfully submitted,

  
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